

### Abstract

Methods, assays, and components are described in which biological samples can be rapidly and sensitively analyzed for the presence of species associated with neurodegenerative disease. Techniques and components are provided for diagnosis of disease, as well as for screening of candidate drugs for treatment of neurodegenerative disease. The techniques are simple, extremely sensitive, and utilize readily-available components. Binding species, capable of binding a neurodegenerative disease aggregate-forming or aggregate-forming species, are fastened to surfaces of electrodes and surfaces of particles, or provided free in solution, to bind aggregate-forming species and/or be involved in aggregation.

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